

ROCKY MOUNTAIN REGION (2)
SAN ISABEL NATIONAL FOREST (12)
SALIDA RANGER DISTRICT (02)

TIMBER SALE REPORT
AND
APPRAISAL SUMMARY

ANTELOPE TIMBER SALE

Prepared by: _____ Date: _____
Patrick Craig
Forester

Reviewed by: _____ Date: _____
Sam Schroeder
Forester

I certify that this sale meets requirements of the Secretary of Agriculture's Regulation 36 CFR 223.30.

Approved by: _____ Date: _____
Tim Slone
District Ranger

Antelope Timber Sale Timber Sale Report

I. SUMMARY OF RECOMMENDATIONS

The following lists the recommendations and results of the appraisal.

Net Volumes (Appraised and found in AT2 of the contract):

<u>Species</u>	<u>Contract Volumes</u>	
Sawtimber		
Ponderosa Pine (Live & Dead)	PP	404 CCF
Douglas Fir & other species (Live & Dead)	DF & 0	176 CCF
POL		
Ponderosa Pine & other species (Live & Dead)	PP	<u>95 CCF</u>
	Total	675 CCF

Subject to Agreement

POL

Aspen (Live & Dead)

Undetermined volume subject to agreement.

Advertised Rates ---

Sawtimber	PP	=	\$3.00/CCF
	DF & O	=	\$3.00/CCF
POL	PP & O	=	\$1.00/CCF
Subject to Agreement	POL	AS	= \$1.00/CCF

Required Slash Deposit is \$0.00/CCF

Road Maintenance Deposit is \$0.71/CCF

Temporary Road Cost is \$8.80/CCF

KV Collection is \$ 1,665.00

Antelope Timber Sale & Appraisal Report

Salvage Sale Fund Collection is \$ 0.00

Specified Road Construction is 0.0 Miles

Specified Road Reconstruction is 0.0 Miles

Termination Date is September 30, 2015

Normal Operating Season is May 15 - November 1

II. SALE AREA DESCRIPTION

1. Location: San Isabel National Forest, Salida Ranger District

County: Fremont

State: Colorado

Legal Description: T51N, R10E, Sections 3, 4, 8, 9, 10: NMPM

2. STARS#: 13201

SALE #: 002

3. Gross Sale Area: 859 acres

4. Net Harvest Area: 357 acres

5. Location and description of private lands, claims, patents, reservations, or special uses within the sale area and measures to protect them. Private lands are adjacent to the sale boundaries, however, no easements are needed to access timber for this sale.

III. SALE OBJECTIVE

Purpose	Activity	Percentage
FS – Forest Health	10	100%

IV. CONDITIONS OF SALE

- A. Planned Cutting Methods

Harvest units will consist of harvesting live and dead ponderosa pine, Douglas-fir, and blue spruce trees. This will be accomplished with individual tree and group selection cut tree marking.

- B. Sale Area Improvements (SAI)

See the SAI plan FS-2400-50 and KV Plan Narrative for detailed information.

C. Slash Treatment

Slash Treatment measures are outlined in CT6.7# Slash Treatment.

V. AREA DESCRIPTION SUMMARY

Unit Number	Harvest Acres	Mgt. Area	TLSC	Harvest Method	Logging Method
1	196	4D	600	4151	420
2	109	4D	600	4151	420
3	3	4D	600	4151	420
4	11	4D	600	4151	420
5	12	4D	600	4151	420
6	26	4D	600	4151	420

Applicable Coding Structure For Area Description
(Timber Land Suitability Class (TLSC, TMIS Handbook))

500 - Suitable, Timber

600 - Suitable, Other Emphasis

630 - Recreation Emphasis

640 - Visual Emphasis

650 - Wildlife Emphasis

660 - Water Emphasis

Harvest Method

4111 - Patch Clearcut

4112 - Strip Clearcut

4113 - Stand Clearcut

4121 - Shelterwood Prep Cut

4131 - Shelterwood Seed Cut

4141 - Shelterwood Removal Cut

4143 - Overstory Removal

4151 - Individual Tree Selection

4152 - Group Selection

4154 - Single Tree Selection (NRN)

4231 - Salvage Intermediate Treatment

4270 - Permanent Clearing

Logging Method

410 - Animal (Horse)

421 - Rubber Tired Skidder

496 - Feller Buncher

420 - Tractor

454 - Other

498 - LowGroundPressure

VI. UNIT SUMMARY

Cutting Unit	PP from Cruise	DF & O from Cruise	POL from Cruise
1	194	84	60
2	136	59	18
3	14	6	1
4	12	6	4
5	6	3	3
6	42	18	9
Total-->	404	176	95

VII. TIMBER VOLUME DETERMINATION

A. Volume Determination

Tree measurement sales with an estimated value of less than \$5,000 are not required to meet a sampling error (FSH 2409.12, Chapter 41.1) however volume determination should be done in a defensible manner. The estimated value at advertised rates is \$1835.00 based on a volume of 675 CCF. Therefore a sampling error is not required to be met based on the volume and value of this sale. This volume was obtained from Antelope T.S. Cruise which was a 1 in 100 Sample Tree measurement cruise. Total Sale error = 15.41%. The final sale error of 15.41 meets the requirements for tree measurement sales with a value greater than \$5,000 and less than or equal to \$15,000 (FSH 2409.12 Chapter 41.1) thus is acceptable.

B. Area Determination Method

The acreage of each cutting unit was determined by the Global Positioning System (GPS) method on all cutting units following direction set forth in FSH 2409.12.52.12. Maps of each cutting unit are filed in the *Presale Folder 2430* for this sale.

VIII. MANAGEMENT REQUIREMENTS AND CONSTRAINTS

NEPA Decision Document: Decision Notice, "Herring Park Management Project"

Date of Project Approval: November 21, 2007

Approved By: William Schuckert

Action or Constraint	Response	When to Accomplish	How Accomplished
Physical Elements			

Action or Constraint	Response	When to Accomplish	How Accomplished
1. Protect current improvements including fences, and spring developments. Range improvements would be protected and replaced, if damaged by treatment.	Improvements identified to protect will be located and protected during prework meeting and throughout contract as identified on sale area map.	Contract preparation and during contract.	Contract includes provision BT6.22 Protection of Improvements, improvements to protect are shown on sale area map.
2. Hauling restrictions would be implemented for the southern portion of the Project Area below Bull Gulch from December 1 through April 15 for big game winter and transitional range protection.	No hauling would occur from December 1 through April 15 unless coordinated with the Wildlife Biologist on an as needed basis.	Contract preparation and during contract.	Contract includes Provisions CT5.12# Use of Roads by Purchaser to provide for the hauling restriction.
3. Seasonal restrictions would be implemented for the southern portion of the Project Area below Bull Gulch from December 1 through April 15 for big game winter and transitional range protection.	No operations would occur from December 1 through April 15 unless coordinated with the Wildlife Biologist on an as needed basis.	Contract preparation and during contract	Contract includes Provisions CT6.312# Sale Operation Restrictions to provide for the sale operating restrictions.
4. Gates and/or barricades would be installed on temporary roads to restrict use by the public during operations and/or until final road closure.	The District does not want to encourage travel in this area other than for sale operations and will provide signs, and barricades to close the roads.	During contract.	The District will provide signs and barricades to close the temporary roads.
5. Temporary Roads used during the project would be closed by ripping and seeding with a native seed source, then signed to inform the public vegetative restoration is in progress. Road closures would occur within six months after completion of treatment(s) in that unit.	The contract will close roads using normal closure methods under BT6.63. Signs will be installed to inform public of vegetative restoration.	Completion of closures prior to completion of contract. Upon completion of road closure.	The District will close roads permanently by ripping and seeding after completion of fuelwood gathering and other treatment actions and will install signs to inform the public of vegetative restoration.

Action or Constraint	Response	When to Accomplish	How Accomplished
6. In forested areas, a 200-foot buffer would be maintained along 75% or more of each side of County Roads 187 and 186 and FDR 174, 174A, 174B, and 174C to discourage and minimize off-road vehicles (OHV) use and to maintain visual screening for wildlife. Mechanical treatment would not take place in the buffer, but prescribed fire may be allowed; hazard trees may be mechanically removed(Forest Plan, pg. III-32).	A 200 ft. buffer has been maintained along 75% of each side of FDR 174 and FDR 174C.	Layout and marking.	Layout and marking were performed to provide for a 200 ft. buffer in forested areas along 75% of each side of the roads.

Action or Constraint	Response	When to Accomplish	How Accomplished
Biological Elements			
1. Protect or provide for one Abert's squirrel nest tree clump (0.1 acre of 9 to 22 inch dbh ponderosa pine with a basal area of 180 to 220, if available, and interlocking canopy) per six acres on ponderosa pine. In addition, all ponderosa pine trees showing sign of Abert's squirrel feeding activity would be retained as wildlife trees	All Abert's squirrel nest tree clumps will be retained and all ponderosa pine trees showing signs of Abert's squirrel feeding activity will be retained as wildlife trees.	During layout and marking	Marking excluded Abert's squirrel nest tree clumps and ponderosa pine trees showing signs of Abert's squirrel activity were designated as wildlife trees.

2. To reduce risk of spreading noxious weeds, coordinate with the Noxious Weed program manager prior to implementation. Heavy equipment would be cleaned and inspected prior to entering the project area.	Timber sale contract will require equipment cleaning.	Prior to equipment moving on Forest.	Contract includes provision BT6.35 Equipment Cleaning.
3. Leave a minimum of 8 snags/ recruitment trees per acre, or 40 per 5 acres	All soft snags will be left unless they present safety hazard. A total of 8 snags/recruitment snags per acre will be left.	Layout and marking	The appropriate numbers of snags per acre are designated as leave trees.

Various design criteria were not addressed due to their inapplicability to timber sale operations or the sale area. Certain design criteria measures were also addressed cumulatively because of their similarity.

IX. VOLUME DETERMINATION

The following volumes are from the FS Cruiser, Report B1:

FS Cruiser Version 10.12.2012
(Volumes expressed in Net CCF Volume)

Table 1

Sawtimber

Ponderosa Pine (Live & Dead) Sawtimber	PP	=	404 CCF	=	60 %
Douglas fir & other species (Live & Dead)	DF & O	=	176 CCF	=	26 %

POL

Ponderosa Pine & other species (Live & Dead)	PP & O	=	95 CCF	=	14%
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Total

=	675 CCF	=	100%
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Average Net Volume / Acre = 675 CCF/357 acres = 1.89 CCF / ac.
67,490 CF / 14,449 trees = 4.67 CF/Tree

Sale Quadratic Mean Diameter = 11.0" DBH (sawtimber)-Report CP1 in cruise processing printout
6.8" DBH (POL)

Board Foot / Cubic Foot Ratio = 4.137 (sawtimber) from Report CS1 in cruise processing printout
6.207 (POL)

Sampling Error = 15.41 from DS1 of cruise processing printout.

Payment Unit Acres and Volume (CCF)

Payment Unit	Acres	Payment Unit Total Volume
1	196	338
2	112	234
3	49	103
Total	357	675

X. VOLUME WORKSHEET COMPUTATIONS

LIVE AND DEAD VOLUME (CCF)

Species	PP	DF & O	POL	
Cruised Gross Volume	425	182	95	
% Additional Unseen Defect CCF/Breakage as part of total, cruise processing (A2)	0%	0%	n/a	
% Seen Defect CCF, cruise processing (CP1)	5%	3%	n/a	
Total Defect	5%	3%	n/a	
(1-Defect)	(.9500)	(.9700)	n/a	
Net Cruise Volume	404	176	95	

**Antelope Timber Sale
Transaction Evidence Appraisal Report**

I. TRANSACTIONAL APPRAISAL SUMMARY

- Adjustments for Quality Unusual Adjustment, Dead Unusual Adjustment, Hauling Fuel Cost, and Logging Fuel Costs.
- Sale appraised to Montrose, CO.

II. ACCESS AND RELATION TO MARKETS

Product	Contract Species	Appraisal Group	Appraisal Point(s)	One Way Haul Miles
Sawtimber	Ponderosa Pine (Live & Dead)	PP	Montrose, CO	238
	Douglas-fir & other species (Live & Dead)	DF	Montrose, CO	
POL	Ponderosa Pine & other species (Live & Dead)	PP	Montrose, CO	238

All material will be appraised to Montrose, Colorado. This mill location is the closest manufacturing and marketing point for a sale of this quantity for sawlog products to be harvested.

III. SALE APPRAISAL VOLUMES

Product	Contract Species	Appraisal Group	Volume (CCF)	Unit of Measure
Sawtimber - 01	Ponderosa Pine (Live & Dead)	PP - 122	404	CCF – 03
	Douglas-fir & other species (Live & Dead)	DF – 202	176	
POL – 03	Ponderosa Pine & other species (Live & Dead)	PP - 122	95	CCF – 09
TOTAL			675	

IV. CURRENT APPRAISAL DATA

Bulletin # BU230213 effective February 19, 2013 Until Superseded

Base Data Period: 1st QTR CY11- 4th QTR CY 12

Appraisal Base Period: (QTR,CY): 6-12

Base Index: September, 2012 (2007-08 basis), 339.25

Base Index Adjusted to CCF (2007-08 Basis), PP WWPA(A): 144.18, DF WWPA(J): 127.22

Index Operations

Sawtimber

	<u>PP</u>	<u>DF</u>
Adjusted Base Period Price	\$3.00	\$19.86
Base Skid and Yard:	\$103.32	\$103.32
Base Haul:	\$68.71	\$60.34
Base Road Maintenance:	\$4.52	\$5.29
Base Slash Disposal:	\$2.14	\$2.23
Base Temporary Roads:	\$2.32	\$3.05

POL

	<u>All Sp.</u>	<u>AS</u>
Adjusted Base Period Price	\$1.00	\$15.54
Base Skid and Yard:	n/a	n/a
Base Haul:	\$0.00	\$0.00
Base Road Maintenance:	\$3.01	\$7.55
Base Slash Disposal:	\$3.25	\$1.14
Base Temporary Roads:	\$1.69	\$2.48

V. HAUL COST CALCULATIONS

SAWTIMBER - Haul to: Montrose, CO.

<u>ROAD</u>	<u>CLASS</u>	<u>GRADE</u>	<u>ROUND TRIP MINUTES/MILE</u>	<u>ONE WAY MILES</u>	<u>VOLUME RATIO</u>	<u>TIME IN MINUTES</u>
NFSR 174C	5C3	-2	6.5	0.3	1	1.7
NFSR 174	5C3	-1	6.5	1.8	1	11.7
CR 2	3C2	-2	5.8	27.5	1	159.5
State Hwy 9	2B1	1	3.6	35.8	1	128.9
US Hwy 24	2B1	-1	3.6	12.9	1	46.4
US Hwy 24/285	2B1	-3	3.6	14.0	1	50.4
US Hwy 285	2B1	-2	3.6	21.1	1	76.0
US Hwy 50	2C1	4	5	18.6	1	93.0
US Hwy 50	2C1	-6	4.2	12.0	1	50.4
US Hwy 50	2B1	-2	3.6	94	1	338.4
Delay time						60.0
Total				238		1016.4

1016.4 total minutes x \$0.1130/CCF/minute (FSH 2409.22 sec.44.0) = **\$114.85/CCF Sawtimber Haul Cost**

POL - Haul to: Montrose, CO.

Total haul miles 238

238 miles – 52 miles = 186 miles

186 miles x \$0.170/CCF/mile = **\$31.62/CCF POL Haul Cost**

VI. SALE ROAD MAINTENANCE DEPOSITS

Following is a list of specified roads requiring road maintenance deposits:

<u>Road</u>	<u>Segment Length</u>	<u>Maintained Miles</u>
NFSR 174	3.0	3.0
NFSR 174C	0.8	0.8
Total		3.8

Deposits = (3.8 miles) (\$0.1625/ccf/mile*1.15 FSOH) (675 CCF) = \$479.33

Total Road Maintenance = \$479.33/675 CCF = **\$0.71 / CCF**

VII. ROCK REPLACEMENT

There is no rock replacement on this sale. All national forest service roads are native surfaces.

VIII. SALE BRUSH DISPOSAL DEPOSITS

N/A

IX. TEMPORARY ROAD COST

Temporary road construction is allowed when the skidding distance exceeds 1,000 feet. It is estimated that the harvest will require approximately 0.4 mile of road to be reopened and 2.4 miles of temporary road to be built. It is also estimated that a D5 Cat w/operator can open 1.0 mile of road in one 8 hour day and construct 0.5 miles of road in one 8 hour day.

Costs to open temporary road

0.4 miles of temporary road opened / 1.0 miles/day = 0.4 days. 1 D5 Cat w/operator @ \$100.00 / hour or \$800.00/day (Mark Varhus) x 0.4 days = \$320.00

Costs to construct temporary road

2.0 miles of temporary road / 0.5 miles/day = 4.0 days. 1 D5 Cat w/operator @ \$100.00 / hour or \$800.00/day (Mark Varhus) x 4.0 days = \$3200.00

Costs for temporary road closing

This cost includes the closure requirements. Close approximately 2.0 miles of temporary road at \$500.00/mile = 2.0 miles x \$500.00 = \$1000.00.

Total Temp. Road Cost

Road Opening	= \$ 320.00
Road Construction	= \$ 3200.00
Road Closing	= \$ <u>1000.00</u>
Total	= \$ 4520.00

$\$4520.00 \times 1.3154(\text{OH}) = \$5945.60/675 \text{ CCF} = \mathbf{\$8.80/CCF}$

X. SKID DISTANCE ADJUSTMENT

The average skid distance is 420 ft. Since the average skidding distance is less than 1000 feet. After the installation of temporary roads, there will be no skidding distance adjustments for this sale. (FSH 2409.22 Ch.51.61)

XI. LOGGING COST ADJUSTMENT

Logging cost adjustment is figured on the R2 TEA234 Appraisal System. It is based on the difference between the appraised sale and Regional average sale diameter and sale volume per acre. (Reference FSH 2409.22, 51.61)

XII. SPECIFIED ROADS

There is no specified road construction or reconstruction for this sale.

XIII. COMPETITION FACTOR

The San Isabel National Forest is currently a non-competitive forest. The competition factor for the San Isabel will be 5% for this Bulletin period.

Sawtimber

	<u>DF</u>	<u>PP</u>
Competition Factor	0.99	0.15

POL

	<u>PP</u>	<u>AS</u>
Competition Factor	0.05	0.78

XIV. BASE RATE ADJUSTMENT FOR REGENERATION COSTS

N/A

XV. BID GUARANTEE

The minimum bid guarantee shall not be less than 10% of the advertised value of the timber required to be removed. (FSH 2409.18, Sec.56.31)

Value of Sale; from TEA appraisal:	\$ 1835.00
	<u>x .10</u>
	\$ 183.50

Round up to next \$100---> \$ 200.00 Bid Guarantee

XVI. APPRAISAL ADJUSTMENTS

Unusual adjustments are sale adjustments made necessary for cost or value items that are not reflected in the appraisal database. (FSH 2409.22, 51.6)

A. Quality Unusual Species and Form Adjustment

1. Quality Unusual Adjustment- DF qualifies for adjustment.

The Appraisal Bulletin suggests an unusual adjustment for quality when the difference between the species mbf/ccf ratio and the zone average mbf/ccf ratio is greater than - 0.010. This assumes that smaller lumber dimensions will be produced from poorer formed trees of equal diameter and therefore an adjustment in advertised rates is justified. This adjustment is available for use on DF. The maximum amount of the optional Quality Unusual Adjustment for DF = -\$7.94.

a. Douglas-fir Quality Unusual Adjustment

Formula from Bulletin:

$$\$73.00 \times \frac{r-R}{.04} \times R = \text{quality adjustment}$$

Where:

R = mbf/ccf ratio for database avg. and r = DF mbf/ccf ratio from the cruise

R = .48368 and r = .3912

Because $.3912 - .48368 = -0.09248$ and is greater than -0.010 , the DF in this sale qualifies for the adjustment.

The adjustment = $\$73.00/\text{MBF} \times (-0.09248/.04) \times .48368 \text{ MBF/CCF} = -\$81.63/\text{CCF}$

The amount of Quality Unusual adjustment applied to DF in the appraisal is **-\$7.94/CCF**

B. Dead Unusual Adjustments

CRUISED VOLUME (CCF)

DF	=	124 CCF	Live
DFD	=	22 CCF	Dead, all brown or no needles
PP	=	377 CCF	Live
PPD	=	27 CCF	Dead, all brown or no needles

APPRAISAL

Using Bulletin BU230213, effective February 19, 2013

Assume: sale award 03/1/13 and sale termination is 09/30/2015

So, sale contract midpoint is estimated to be 04/01/2014

ASSUMPTIONS

1. Dead Douglas-fir Unusual Adjustment

$1.0 \times 22 \text{ CCF} = 22 \text{ CCF}$ of DFD already dead.

Total dead at midpoint is: 22 CCF of DFD = 22 CCF total dead at midpoint.

SO

Appraise 124 CCF of DF as live sawtimber.

Appraise 22 CCF as DFD dead sawtimber.

146 CCF Total Live and Dead DF sawtimber

APPRAISAL ADJUSTMENTS

1. Develop unusual adjustment factor for dead volume 22 CCF of dead DF sawtimber.

Multiply the species adjusted base period price from the bulletin by 0.5 for the dead unusual adjustment.

$(\$19.86/\text{CCF}) \times (0.5) = \mathbf{\$9.93/CCF}$ unusual adjustment factor for 22 CCF of dead DF sawtimber.

2. Develop total weighted average live and dead unusual adjustment for all DF sawtimber (live and dead).

$$\frac{(\$0.00/\text{CCF} \times 124 \text{ CCF}) + (\$9.93/\text{CCF} \times 22 \text{ CCF})}{124 \text{ CCF} + 22 \text{ CCF}}$$

= **-\$1.63/CCF** total weighted average dead unusual adjustment for DF sawtimber

2. Dead Ponderosa Pine Unusual Adjustment

$1.0 \times 27 \text{ CCF} = 27 \text{ CCF}$ of DFD already dead.

Total dead at midpoint is: 27 CCF of PPD = 27 CCF total dead at midpoint.

SO

Appraise 377 CCF of PP as live sawtimber.

Appraise 27 CCF as PPD dead sawtimber.

404 CCF Total Live and Dead PP sawtimber

APPRAISAL ADJUSTMENTS

1. Develop unusual adjustment factor for dead volume 27 CCF of dead PP sawtimber.

Multiply the species adjusted base period price from the bulletin by 0.5 for the dead unusual adjustment.

$(\$3.00/\text{CCF}) \times (0.5) = \mathbf{\$1.50/CCF}$ unusual adjustment factor for 27 CCF of PP dead sawtimber.

3. Develop total weighted average live and dead unusual adjustment for all PP sawtimber (live and dead).

$$\frac{(\$0.00/\text{CCF} \times 377 \text{ CCF}) + (\$1.50/\text{CCF} \times 27 \text{ CCF})}{377 \text{ CCF} + 27 \text{ CCF}}$$

= **-\$0.10/ CCF** total weighted average dead unusual adjustment for PP sawtimber

C. Fuel Cost Adjustments

1. Hauling Fuel Cost Adjustment (Sawtimber)

A negative (-)\$0.001/mile/CCF log haul fuel cost adjustment will be added as an unusual adjustment to all hauling costs developed using the standard procedures in FSH 2409.22. The haul cost fuel adjustment should not be used for haul costs that are developed empirically using procedures that use the current cost of fuel in the development of hauling costs.

The one way haul distance is 238 miles. The round trip haul distance is 476 miles. The round trip haul time is 16.9 hours. Standard R2 procedures are being used to develop the haul costs.

The log haul fuel adjustment is: 476 miles X -\$0.001/mile/CCF = **-\$0.48 per CCF**

In addition to the normal haul cost, a **-\$0.48/CCF** haul fuel cost adjustment will be added as an unusual adjustment to the “Species level Information Screen”.

2. Logging Fuel Cost Adjustment (Sawtimber)

Also, a negative (-) \$0.24/CCF logging cost fuel adjustment for all ground based and skyline logging costs developed using the standard R2 logging cost procedures will be used. This adjustment is to be used for logging costs that are developed using the R2 TEA234 appraisal program, and should not be used for logging costs that are developed empirically using procedures that include the current cost of fuel in the development of logging costs. This cost adjustment, if applicable, should be entered as a **-\$0.24** unusual adjustment to all species in the “Species Level Information” screen of the appraisal program.

3. Hauling Fuel Cost Adjustment (POL)

A negative (-)\$0.001/mile/CCF log haul fuel cost adjustment will be added as an unusual adjustment to all hauling costs developed using the standard procedures in FSH 2409.22. The haul cost fuel adjustment should not be used for haul costs that are developed empirically using procedures that use the current cost of fuel in the development of hauling costs.

The one way haul distance is 238 miles. The round trip haul distance is 476 miles. The round trip haul time is 16.9 hours. Standard R2 procedures are being used to develop the haul costs.

The log haul fuel adjustment is: 476 miles X -\$0.001/mile/CCF = **-\$0.48 per CCF**

In addition to the normal haul cost, a **-\$0.48/CCF** haul fuel cost adjustment will be added as an unusual adjustment to the “Species level Information Screen”.

4. Logging Fuel Cost Adjustment (POL)

Also, a negative (-) \$0.24/CCF logging cost fuel adjustment for all ground based and skyline logging costs developed using the standard R2 logging cost procedures will be used. This adjustment is to be used for logging costs that are developed using the R2 TEA234 appraisal program, and should not be used for logging costs that are developed empirically using procedures that include the current cost of fuel in the development of logging costs. This cost adjustment, if applicable, should be entered as a **-\$0.24** unusual adjustment to all species in the “Species Level Information” screen of the appraisal program.

D. Appraisal Adjustment Summary

Species:	DF	PP	POL
Slash Disposal	N/A	N/A	N/A
Quality Unusual Adjustment	-\$7.94	N/A	N/A
Dead Unusual Adjustment	-\$1.63	-\$0.10	N/A
Haul Fuel Cost Adjustment	-\$0.48	-\$0.48	-\$0.48
Log Fuel Cost Adjustment	-\$0.24	-\$0.24	-\$0.24
SUB-TOTAL <i>(slash costs are put into TEA234 separately)</i>	-\$10.29	-\$0.82	-\$0.72

XVII. CALCULATION OF PERFORMANCE BOND

(AT18) There are two methods of calculating the performance bond per FSH 2409.18, Sec.54.1. The larger of the two calculations is used for the minimum performance bond.

A. Bond Based on 10% of Advertised Stumpage Value - Method I

$$\begin{array}{rcl}
 \text{Advertised Stumpage Value} = & \$ & 1,835.00 \\
 & & \times .10 \\
 & \$ & 183.50
 \end{array}$$

Round up to next \$100.00 --->\$200.00

B. Bond Based on Penal Sum - Method II, work required for one logging season (without TPOH)

Sale Volume = 675 CCF /3 operating seasons = 225 CCF
Road Closure Cost for sale = \$1000.00

$$\begin{array}{ll}
 \text{*Lopping (10\% of fall, buck cost): } \$17.00/\text{CCF} \times .10 & = \$1.70 / \text{CCF} \\
 \text{*Water barring (5\% of skid cost): } \$23.45 \times .05 & = \$1.17 / \text{CCF} \\
 \text{\frac{1}{2} Temp road closure: } \$1000.00 \times .5 = \$500/675 & = \underline{\$0.74 / \text{CCF}}
 \end{array}$$

$$\text{Total:} = \$3.61/\text{CCF}$$

$$\begin{array}{l}
 \$3.61/\text{CCF} \times 225 \text{ CCF} \times 1.16 \text{ FSOH} = \$942.21 \\
 \text{Round up to next thousand ---> } \$1,000.00
 \end{array}$$

The greater of Method I or Method II is: **\$1,000.00**

* Used zone average appraisal cost R2 Amendment 2409.22-95-3 Sec.42

XVIII. PURCHASER'S OBLIGATION FOR FIRE

(AT15) FSH 2409.18, Sec.53.31

Wage rate for AD-2 firefighter = \$11.32 / hour*

Estimate a 4-person woods crew.

4 people x \$11.32 / hour x 12 hours x 3 days = \$1630.08

Round to the nearest hundred ---> **\$1,600.00**

* FSH 5109.34 - Interagency Incident Business Management Handbook

XIX. CALCULATION OF PERIODIC PAYMENT DATES

N/A

XX. STUMPAGE AVAILABLE FOR KV and SSSS

Total Sale Value = \$ 1,835.00

Less to NFF = \$ 169.00

Stumpage available for KV and SSSS funding = \$ 1,666.00